

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listing of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Currently amended) A humanity interface development system of a testing program of a circuit board, comprising:

a display of a main menu by which an operator ~~may~~ selects one of multiple items with data pre-built therein, the main menu including: building configuration of objects to be tested, defining a ~~a~~ footing of objects to be tested, using a program generator, building data of testing chapters, building documents and figure files of objects to be tested, building reference data, building intercepted data of coordinates of positions of parts, building relationships of items to failure rates of parts, and linking and compiling files, building of data of each object to be tested co-operating with the program generator to produce the required program, and the items of building data of testing chapters and linking and compiling files co-operating with steps of building of data of each object to be tested, so that the operator ~~may~~ conveniently uses data base and programs that are built according to existing orders of the system for testing a circuit board.

Claim 2 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein building configuration of objects to be tested includes the following steps:

selecting a name of ~~the~~ an object to be tested: displaying a name of ~~the~~ an object to be selected from an existing data base of a display, choosing and identifying the name of the object;

displaying the data of the object to be tested: displaying original chosen records in the data base to facilitate ~~judgement~~ judgment of following addition and amendment; and

selecting processed items: selecting items of addition, deletion, amendment or returning to a previous page, wherein if the item of addition is chosen, the operator needs to input the data of the new board object to be tested, then store the data, and then return to the step of selecting the name of the object to be tested; if the item of deletion is chosen, the data of the object to be tested is deleted directly; if the item of amendment is chosen, the data of the object to be tested is amended, and is stored; if the item of returning to the previous page is chosen, the operator ~~may~~ returns to the ~~picture~~ display of the main menu, whereby contents of each basic configuration of the objects to be tested ~~may be~~ is built.

Claim 3 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein defining a footing of objects to be tested includes the allowing steps:

displaying a picture of ~~the~~ a name of ~~the~~ a selected object to be tested: displaying ~~the~~ a picture of ~~the~~ a name and related illustration of ~~the~~ a selected object to be tested, to facilitate direct reference of the operator;

if it is a new object to be tested: judging if it is a new object to be tested, if it is a new object to be tested, the operator ~~may~~ proceeds with the following settings, including:

selecting a clamping tool: selecting an existing common clamping tool or making a new clamping tool;

assigning ~~destining~~ a new number: defining a new number to the new board to facilitate identification; and

inputting footing data: inputting data of each footing manually;

if it is not a new object to be tested, it means that the object to be tested is an electronic board that has generated ~~the~~ a testing program, so that the data base of the system ~~may~~ directly displays the a record for identification of the operator;

selecting a processing manner: the operator ~~may~~ selects printing and ~~may~~ selects the printing item to print data of each chosen item for reference; if the operator selects ending, he needs to select the clamping tool, and has to select an

existing common clamping tool or make a new clamping tool; if the operator selects the existing common clamping tool, the original footing data in the system ~~may be~~ is processed directly, to reproduce the cleared file of the footing to the respective data menu, and the procedure is then ended; if the operator selects to make a new clamping tool, the procedure is directly ended.

Claim 4 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein ~~the a~~ procedure of using ~~the a~~ program generator includes the following steps:

displaying ~~the a~~ name of ~~the an~~ object to be tested: displaying ~~the a~~ name ~~the a~~ object to be tested and the related data for identification of ~~the a~~ designer;

confirming: if the operator confirms the object to be tested, the following procedure ~~may be~~ is performed; if the operator does not confirm the object to be tested, ~~the picture returns to the main menu~~ is displayed;

selecting the program manner: the operator ~~may~~ respectively selects the modes of ~~the a~~ program parameter, including testing, debug or limit; if the operator selects the testing mode, he ~~may~~ inputs a ~~the~~ testing parameter, if the operator selects the debug mode, he ~~may~~ inputs a ~~the~~ debug parameter, after the two items of inputting the testing parameter and inputting the debug parameter are input, the system respectively enters the designs of test program or debug

program, and ~~the picture may indicate a~~ the flow chart button is displayed to prepare to proceed to a step of selecting ~~the a~~ testing flow chart; if the operator selects the limit mode, ~~the picture indicates selecting the an~~ item of ~~the a~~ chapter or section to be amended is displayed, and selecting a testing manner to select a testing manner such as the function test or a debug test, and after selection to perform the step of selecting a testing number or selecting a testing number and debugging, then filling ~~the a~~ limit value for each program or step; then selecting confirming the above steps and actions, if the above steps and actions are not confirmed, ~~the picture returns to the main menu~~ is displayed, if the above steps and actions are confirmed, the data in the data base ~~may be~~ is changed, and ~~the picture returns to the step of displaying the name of the object to be tested~~ is displayed.

Claim 5 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim ~~[[1]]~~ 4, wherein a procedure of selecting ~~the a~~ testing flow chart includes: a process of file maintenance or reproduction, and selecting a button of a testing flow chart.

Claim 6 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 5, wherein selecting the item of ~~the~~ a testing flow chart ~~may be~~ is changed and designed according to different testing processes and manners, and the most complete process of selecting the item of ~~the~~ a testing flow chart includes the following steps: setting power supply of the system, starting, a first pause, setting ~~the~~ an exciting signal, a second pause, setting a measuring signal, a third pause, closing ~~the~~ an exciting signal, a fourth pause, updating codes of ~~the~~ a testing program, and updating codes of ~~the~~ a debug program.

Claim 7 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the ~~procedure~~ step of setting power supply of the system includes the following steps:

setting a flow chart of power supply: inputting values of voltage and current, then selecting a picture of a next output mode, such as outputting SS Check Box, then selecting confirming, if the above actions are confirmed, checking if ~~the~~ a mode of the footing satisfies ~~the~~ a standard mode of the footing, such as the mode of Form C Relay 414, then checking if the preset power supply of the footing is correct, if not, amending ~~the~~ a footing definition and returning to the step of setting the flow chart of power supply to repeat the work; if the preset

power supply of the footing is correct, storing the above data, and then returning to ~~the picture~~ a display of selecting ~~the~~ a testing flow chart.

Claim 8 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the step of starting procedure includes the following steps:

starting the flow chart: the system directly judging a parameter to directly enter a testing step or a debugging step, then inputting a content number, then judging if it is a new step or an old step, to respectively enter the step of definition of a new step or download of an old step, then judging if the parameter and the step are reproduced to the next chapter or section, if so, changing the parameter, then selecting confirming, if the above action is confirmed, storing the new parameter, if the above action is not confirmed, returning to ~~the picture~~ a display of selecting ~~the~~ a testing flow chart.

Claim 9 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the step processes of the first pause, the second pause, the third pause, and the fourth pause respectively include the steps of: filling a hint message, and storing the hint message.

Claim 10 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the ~~procedure~~ step of setting ~~the~~ an exciting signal includes: selecting ~~the~~ an exciting signal, then inputting values and conditions, then selecting confirmation, if the input values and conditions are confirmed, then storing the input values and ~~the~~ conditions, if the input values and the conditions are not confirmed, returning to ~~the picture~~ a display of selecting ~~the~~ a testing flow chart.

Claim 11 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the ~~procedure~~ step of setting a measuring signal includes a flow chart of setting ~~the~~ a measuring signal which includes the following steps: directly selecting ~~the~~ a measuring signal, then confirming if another instrument is used, when confirming another instrument is used, displaying ~~the~~ a picture of the instrument and inputting ~~the~~ values and conditions, when confirming no other instrument is used, directly inputting ~~the~~ values and conditions, then selecting confirmation, if the input values and conditions are confirmed, storing the input values and conditions, if the input

values and conditions are not confirmed, returning to ~~the picture~~ a display of selecting ~~the~~ a testing flow chart.

Claim 12 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the ~~procedure~~ step of closing ~~the~~ an exciting signal includes ~~the~~ a flow chart of closing ~~the~~ an exciting signal which includes the following steps: selecting ~~the~~ an exciting signal to be closed, then selecting confirmation, if the selection is confirmed, storing ~~the~~ changed results, if the selection is not confirmed, returning to ~~the picture~~ a display of selecting ~~the~~ a testing flow chart.

Claim 13 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the ~~procedures~~ step of updating codes of ~~the~~ a testing program, and updating codes of ~~the~~ a debug program include the following steps: judging if ~~the~~ a column is blank, if the column is blank, directly displaying ~~the~~ a hint, if the column is not blank, ~~performing the action of~~ then capturing ~~the~~ program codes.

Claim 14 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 5, wherein the process of file maintenance or reproduction includes the following steps:

selecting file maintenance or reproduction: selecting the process of file maintenance or reproduction, if the process of file maintenance is selected, it is necessary to select ~~the~~ a manner of file maintenance, if the process of reproduction is selected, it is necessary to select ~~the~~ a manner of reproduction; wherein,

if the operator selects the manner of file maintenance, it includes the following steps:

selecting ~~the~~ a class of ~~the~~ a program code: selecting a testing parameter or a debugging parameter, then returning to ~~the picture~~ a display of selecting ~~the~~ a testing flow chart, to respectively perform ~~the~~ a design of ~~the~~ a testing program or ~~the~~ a debugging program;

selecting amending ~~the~~ a program code: selecting ~~the~~ a content of amendment for testing or debugging, so as to select ~~the~~ a number of ~~the~~ a primary and a secondary testing or debugging step, and to make sure ~~the~~ a content of the testing program, and selecting ~~the~~ a manner of amendment for different program codes, so as to select ~~the working process such as~~ a deletion, insertion or cancel working process, then selecting confirmation, if selecting the cancel working process, then directly returning to ~~the picture~~ a display of selecting ~~the~~ a testing flow chart, if selecting the ~~working process of deletion~~ working process or

insertion working process, then amending the content of the data base, and then returning to the ~~procedure~~ step of selecting amending the a program code;

selecting returning to ~~the picture~~ a display of ~~the a~~ program generator or returning to the ~~picture~~ display of the main menu, then returning to ~~the destined an~~ assigned position, ~~to facilitate the following operator;~~

if the operator selects ~~the a~~ manner of reproduction, it includes the steps of selecting three modes of reproduction, including: ~~the a testing programs program~~ being reproduced mutually, ~~the a testing programs program~~ being reproduced to the debugging programs, and the debugging programs being reproduced mutually, after selection, filling the reproduced content, then selecting confirmation, if not confirmed, then returning to ~~the picture~~ a display of selecting ~~the a~~ testing flow chart, if confirmed, then copying the reproduced content and returning to ~~the picture~~ a display of filling the reproduced content to repeat the ~~above mentioned work until the work is finished~~ steps therefrom.

Claim 15 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein ~~the a~~ procedure of building data of testing chapters includes the following steps: selecting ~~the an~~ object to be tested; then displaying ~~the~~ testing contents to indicate the number and name of the testing contents of each chapter or section, and then

inputting a representative code into the content of the ~~picture~~ display to facilitate classification.

Claim 16 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein ~~the~~ a procedure of building documents and figure files of objects to be tested includes the following steps: preparing ~~the~~ a hint of documents and figure files, so that when ~~the~~ a designer selects the ~~item of~~ building documents and figure files of objects to be tested from the main menu, ~~the picture may display~~ the related hints are immediately displayed, to remind the designer ~~of preparing to prepare~~ the related documents and figure files for ~~requirement of inputting~~ input, and then the designer ~~may~~ makes sure of building the documents and figure files of objects to be tested.

Claim 17 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein ~~the~~ a procedure of building reference data includes the following steps: selecting a new board or an old board, if selecting the new board, then building data of ~~the~~ practical figures and images and data of ~~the~~ respective positions of ~~the~~ parts

according to an instruction, so as to input ~~the~~ figure file data of ~~the~~ files of the practical figures and images and ~~the~~ files of the positions of the parts, and placing them in ~~the destined~~ an assigned menu, if selecting the old board, then directly selecting ~~the~~ data on the figure files ~~by the~~ using a cursor, and then displaying the ~~image to display the picture of the related~~ figure files for confirmation of ~~the a~~ designer.

Claim 18 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein ~~the a~~ procedure of building intercepted data of coordinates of positions of parts includes the following steps:

selecting ~~the~~ an object to be tested: selecting ~~the a~~ corresponding object to be tested, or selecting ~~the item of returning~~ to return to the main menu to return to ~~the destined~~ an assigned location;

selecting inspection or building: after selecting the object to be tested, then selecting ~~the item of selecting~~ inspecting the circuit board or building the data base, if selecting ~~the item of~~ inspecting the circuit board, then selecting controlling the picture display to ~~directly amplify the~~ enlarge an inspection picture, if selecting ~~the item of~~ building the data base, then selecting building ~~the a~~ related coordinate;

selecting controlling the ~~picture~~ display: selecting locally ~~amplifying the picture by the~~ enlarging the inspection picture using a mouse or amplifying the sub-picture enlarging a portion thereof; if selecting locally ~~amplifying~~ enlarging the inspection picture by the mouse, then moving the mouse to directly inspect the inspection picture, if selecting ~~amplifying the sub-picture~~ enlarging a portion of the inspection picture, then forming a small-sized ~~amplifying~~ enlarged inspection picture in the ~~original picture~~ display;

selecting building ~~the~~ a related coordinate: selecting ~~the~~ a mode of building ~~the~~ a related coordinate for ~~the~~ a reference point or member;

selecting building ~~the~~ a coordinate of the reference point: directly moving the cursor to select ~~the~~ a position of ~~the~~ a part, thereby forming a region that ~~may~~ produces ~~the~~ related coordinates, and then selecting confirmation;

selecting building ~~the~~ a coordinate of ~~the~~ a member: building ~~the~~ coordinate of ~~the~~ a member, such as ~~the~~ an electronic part of the circuit board to be tested, including the allowing steps:

selecting ~~the~~ a processing manner: selecting ~~the~~ a processing manner of amendment or addition;

amendment: directly selecting amendment of ~~the~~ a picture of ~~the~~ a part, and then selecting confirmation;

addition: selecting ~~the~~ a part, then selecting confirmation, then inputting ~~the~~ a representative code, and then selecting ~~confirmation~~ confirmation, whereby

the procedure of building intercepted data of coordinates of positions of parts ~~may be~~ is accomplished ~~conveniently~~, so that each of the parts of the circuit board ~~may~~ correspond to the data base of the system.

Claim 19 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein ~~the~~ a procedure of building relationships of items to failure rates of parts includes the following steps: selecting ~~the~~ a name of ~~the~~ an object to be tested; then displaying ~~the picture so as to indicate the~~ a picture of ~~the~~ a corresponding part; inputting ~~the~~ a rate to indicate the part corresponding to the item and ~~the~~ a failure rate of the corresponding part, to facilitate ~~the~~ analysis work of the testing program.

Claim 20 (Currently amended) The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein ~~the~~ a procedure of linking and compiling files includes the following steps: selecting the name and picture of ~~the~~ an object to be tested; after confirmation, then making the testing program by ~~the~~ a compiling process, if not confirmed, returning to the main menu.